IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of

Yasuyuki KIMURA et al. Group Art Unit: 1771

Serial No. 10/031,183 Examiner: Jenna Leigh BEFUMO

Filed: October 4, 2001

For: GLASS CLOTH AND PRINTED WIRING BOARD

DECLARATION UNDER RULE 132

Honorable Commissioner of Patents and Trademarks
Washington, D.C. 20231

Sir:

I, Yoshinobu FUJIMURA, a citizen of Japan, residing at Asahi-Schwebel CO., LTD., Technology and Development, 397-4, Shimokaeba, Kawada-cho, Moriyama-shi, Siga, Japan, respectively, sincerely and solemnly declare:

That I am by profession a chemical engineer and that I graduated from Nara National College of Technology, Department of Chemical Engineering on March, 1990.

That, since April, 1990, I have been employed by Asahi-Schwebel CO., LTD. and have been engaged in research

and development section mainly into the development of new glass fabric at Asahi-Schwebel CO., LTD.

That I am one of the joint inventors of the invention as disclosed and claimed in the above-mentioned application.

The object of the experiments is to prove that a glass cloth disclosed in JP 11-061596 cannot have an excellent processibility such as that in the present invention, when using a laser beam.

EXPERIMENTS

Using a glass cloth disclosed in Example 4 (a glass yarn having a single-fiber's diameter of 7 μm is used) of JP"596, a laminated board for a printed wiring board was prepared in accordance with "Preparation of a laminated board for a printed wiring board" disclosed on page 11, lines 16 to 26 of the present specification.

According to "Estimation of processibility of printed wiring board" disclosed on page 11, line 27 to page 12, line 9 of the present specification, the laminated board obtained above was bored with 50 micro-holes by means of a carbon-oxide gas laser. After the boring, the roughness of the inner wall and the reproducibility of the holes were

examined.

The results are disclosed below.

As a result of the examination of the 50 holes, seven holes (14%) were not sufficiently bored in the surface layer thereof which was a hardened pre-preg layer composed of epoxy resin, that is, a layer except for a copper core sheet in the laminated board was not sufficiently bored. Therefore, the roughness of the inner wall and the dispersion of the hole-diameter could not be examined.

On the other hand, when a glass cloth was made of glass yarns having a single-fiber diameter of 4.5 μm or 5 μm used in Examples of the present invention, 50 holes of the laminated board were sufficiently bored in the surface layer.

CONCLUSION

As understood from the above results, it is clear that the excellent processibility such as that in the present invention cannot be obtained, when using a glass yarn having a single-fiber diameter of 7 μm as disclosed in JP'596. Also, it is surmised that the excellent processibility such as that in the present invention cannot be obtained, when using a glass yarn having a single-fiber diameter of 9 μm as disclosed in JP'596.

I, the undersigned declarant, declare further that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and; further, that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001, of Title 18, of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Signed this 15th day of April , 2005

Yoshinobu Fujimura

Yoshinobu Fujimura